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COMPOSITIONS AND METHODS FOR MODULATING PHYSIOLOGY OF EPITHELIAL JUNCTIONAL ADHESION MOLECULES FOR ENHANCED MUCOSAL DELIVERY OF THERAPEUTIC COMPOUNDS

Docket Number: 02-03US, Inventor: Quay, Atty: Paul G. Lunn (425) 908-3643

FIGURE 1

Human JAM-1: 299 amino acids.

MGTKAQVERKLLCLFILAILLCSLALGSVTVHSSEPEVRIPENNPVKLSCAYSGFSSP RVEWKFDQGDTTRLVCYNNKITASYEDRVTFLPTGITFKSVTREDTGTYTCMVS EEGGNSYGEVKVKLIVLVPPSKPTVNIPSSATIGNRAVLTCSEQDGSPPSEYTWF KDGIVMPTNPKSTRAFSNSSYVLNPTTGELVFDPLSASDTGEYSCEARNGYGTPM TSNAVRMEAVERNVGVIVAAVLVTLILLGILVFGIWFAYSRGHFDRTKKGTSSKKVI YSOPSARSEGEFKOTSSFLV (SEQ ID NO: 887)

FIGURE 2

Human JAM-2: 310 amino acids.

MALRRPPRLRLCARLPDFFLLLLFRGCLIGAVNLKSSNRTPVVQEFESVELSCIITDS
QTSDPRIEWKKIQDEQTTYVFFDNKIQGDLAGRAEILGKTSLKIWNVTRRDSAL
YRCEVVARNDRKEIDEIVIELTVQVKPVTPVCRVPKAVPVGKMATLHCQESEGH
PRPHYSWYRNDVPLPTDSRANPRFRNSSFHLNSETGTLVFTAVHKDDSGQYYCI
ASNDAGSARCEEQEMEVYDLNIGGIIGGVLVVLAVLALITLGICCAYRRGYFINNKQ
DGESYKNPGKPDGVNYIRTDEEGDFRHKSSFVI (SEQ ID NO: 888)

FIGURE 3

Human JAM-3: 298 amino acids.

MARRSRHRLLLLLRYLVVALGYHKAYGFSAPKDQQVVTAVEYQEAILACKTPK
KTVSSRLEWKKLGRSVSFVYYQQTLQGDFKNRAEMIDFNIRIKNVTRSDAGKYR
CEVSAPSEQGONLEEDTVTLEVLVAPAVPSCEVPSSALSGTVVELRCQDKEGNP
APEYTWFKDGIRLLENPRLGSQSTNSSYTMNTKTGTLQFNTVSKLDTGEYSCEA
RNSVGYRRCPGKRMQVDDLNISGIIAAVVVVALVISVCGLGVCYAQRKGYFSKETS
FQKSNSSSKATTMSENDFKHTKSFII (SEQ ID NO: 889)

FIGURE 4

Human Claudin-1: XM_003151 (Direct submission to ENTREZ/GenBank database, National Center for Biotechnology Information); 211 amino acids

MANAGLQLLGFILAFLGWIGAIVSTALPQWRIYSYAGDNIVTAQAMYEGLWMSCV
SQSTGQIQCKVFDSLLNLSSTLQATRALMVVGILLGVIAIFVATVGMKCMKCLEDD
EVQKMRMAVIGGAIFLLAGLAILVATAWYGNRIVQEFYDPMTPVNARYEFGQALF
TGWAAASLCLLGGALLCCSCPRKTTSYPTPRPYPKPAPSSGKDYV (SEQ ID NO: 890)

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FIGURE 5

Human Claudin-2: XM_010309 (Direct submission to ENTREZ/GenBank database, National Center for Biotechnology Information); 230 amino acids MASLGLQLVGYILGLLGLLGTLVAMLLPSWKTSSYVGASIVTAVGFSKGLWMECA THSTGITQCDIYSTLLGLPADIQAAQAMMVTSSAISSLACIISVVGMRCTVFCQESR AKDRVAVAGGVFFILGGLLGFIPVAWNLHGILRDFYSPLVPDSMKFEIGEALYLGIIS SLFSLIAGIILCFSCSSQRNRSNYYDAYQAQPLATRSSPRPGQPPKVKSEFNSYSLTGY V (SEQ ID NO: 891)

FIGURE 6

Human Claudin-3: XM_057967 (Direct submission to ENTREZ/GenBank database, National Center for Biotechnology Information); 220 amino acids MSMGLEITGTALAVLGWLGTIVCCALPMWRVSAFIGSNIITSQNIWEGLWMNCVV QSTGQMQCKVYDSLLALPQDLQAARALIVVAILLAAFGLLVALVGAQCTNCVQD DTAKAKITIVAGVLFLLAALLTLVPVSWSANTIIRDFYNPVVPEAQKREMGAGLYV GWAAAALQLLGGALLCCSCPPREKKYTATKVVYSAPRSTGPGASLGTGYDRKDYV (SEQ ID NO: 892)

FIGURE 7

Human Claudin-4: XM_057966 (Direct submission to ENTREZ/GenBank database, National Center for Biotechnology Information); 209 amino acids MASMGLQVMGIALAVLGWLAVMLCCALPMWRVTAFIGSNIVTSQTIWEGLWMN CVVQSTGQMQCKVYDSLLALPQDLQAARALVIISIIVAALGVLLSVVGGKCTNCLE DESAKAKTMIVAGVVFLLAGLMVIVPVSWTAHNIIQDFYNPLVASGQKREMGASL YVGWAASGLLLLGGGLLCCNCPPRTDKPYSAKYSAARSAAASNYV (SEQ ID NO: 893)

FIGURE 8

Human Claudin-5: XP_009839 218 amino acids
MGSAALEILGLVLCLVGWGGLILACGLPMWQVTAFLDHNIVTAQTTWKGLWMS
CVVQSTGHMQCKVYDSVLALSTEVQAARALTVSAVLLAFVALFVTLAGAQCTTC
VAPGPAKARVALTGGVLYLFCGLLALVPLCWFANIVVREFYDPSVPVSQKYELGAA
LYIGWAATALLMVGGCLLCCGAWVCTGRPDLSFPVKYSAPRRPTATGDYDKKNYV
(SEQ ID NO: 894)

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FIGURE 9

Human Claudin 6: XM_012518 (Direct submission to ENTREZ/GenBank database, National Center for Biotechnology Information); 220 amino acids MASAGMQILGVVLTLLGWVNGLVSCALPMW<u>KVTAFIGNSIVVAQVVWEGLWMS</u>
<u>CVVQSTGQMQCKVYDSLLALPQDLQAAR</u>ALCVIALLVALFGLLVYLAGAKCTTC
VEEKDSKARLVLTSGIVFVISGVLTLIPVCWTAHAVI<u>RDFYNPLVAEAQKRE</u>LGASL
YLGWAASGLLLLGGGLLCCTCPSGGSQGPSHYMARYSTSAPAISRGPSEYPTKNYV
(SEQ ID NO: 895)

FIGURE 10

Human Claudin-7: O95471....[gi:6685282] 211 amino acids
MANSGLQLLGFSMALLGWVGLVACTAIPQW<u>OMSSYAGDNIITAQAMYKGLWMD</u>
CVTQSTGMMSCKMYDSVLALSAALQATRALMVVSLVLGFLAMFVATMGMKCTR
CGGDDKVKKARIAMGGGIIFIVAGLAALVACSWYGHQIV<u>TDFYNPLIPTNIKYE</u>FGP
AIFIGWAGSALVILGGALLSCSCPGNESKAGYRAPRSYPKSNSSKEYV (SEQ ID NO: 896)

FIGURE 11

Human Claudin-8: XM_009721 (Direct submission to ENTREZ/GenBank database, National Center for Biotechnology Information); 225 amino acids MATHALEIAGLFLGGVGMVGTVAVTVMPQWRVSAFIENNIVVFENFWEGLWMN CVRQANIRMQCKIYDSLLALSPDLQAARGLMCAASVMSFLAFMMAILGMKCTRC TGDNEKVKAHILLTAGIIFIITGMVVLIPVSWVANAIIRDFYNSIVNVAQKRELGEAL YLGWTTALVLIVGGALFCCVFCCNEKSSSYRYSIPSHRTTQKSYHTGKKSPSVYSRSQ YV (SEQ ID NO: 897)

FIGURE 12

Human Claudin-9: NP_066192 217 amino acids
MASTGLELLGMTLAVLGWLGTLVSCALPLWKVTAFIGNSIVVAQVVWEGLWMSC
VVQSTGQMQCKVYDSLLALPQDLQAARALCVIALLLALLGLLVAITGAQCTTCVE
DEGAKARIVLTAGVILLLAGILVLIPVCWTAHAIIQDFYNPLVAEALKRELGASLYL
GWAAAALLMLGGGLLCCTCPPPQVERPRGPRLGYSIPSRSGASGLDKRDYV (SEQ ID NO: 898)

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FIGURE 13

Human Claudin-10: XM 007076 228 amino acids
MASTASEIIAFMVSISGWVLVSSTLPTDYWKVSTIDGTVITTATYWANLWKACVTD
STGVSNCKDFPSMLALDGYIQACRGLMIAAVSLGFFGSIFALFGMKCTKVGGSDKA
KAKIACLAGIVFILSGLCSMTGCSLYANKITTEFFDPLFVEQKYELGAALFIGWAGAS
LCIIGGVIFCFSISDNNKTPRYTYNGATSVMSSRTKYHGGEDFKTTNPSKQFDKNAYV
(SEQ ID NO: 899)

FIGURE 14

Human Occludin: U49184; 522 amino acids.

MSSRPLESPPPYRPDEFKPNHYAPSNDIYGGEMHVRPMLSQPAYSFYPEDEILHFYKW TSPPGVIRILSMLIIVMCIAIFACVASTLAWDRGYGTSLLGGSVGYPYGGSGFGSYGSGYGYGYGYGYGYGYGYGTDPRAAKGFMLAMAAFCFIAALVIFVTSVIRSEMSRTRR YYLSVIIVSAILGIMVFIATIVYIMGVNPTAQSSGSLYGSQIYALCNQFYTPAATGLYVDQYLYHYCVVDPQEAIAIVLGFMIIVAFALIIFFAVKTRKMDRYDKSNILWDKEHIYDEQPPNVEEWVKNVSAGTQDVPSPPSDYVERVDSPMAYSSNGKVNDKRFYPESSYKSTPVPEVVQELPLTSPVDDFRQPRYSSGGNFETPSKRAPAKGRAGRSKRTEQDHYETDYTTGGESCDELEEDWIREYPPITSDQQRQLYKRNFDTGLQEYKSLQSELDEINKELSRLDKELDDYREESEEYMAAADEYNRLKQVKGSADYKSKKNHCKQLKSKLSHIKKMVGDYDRQKT (SEQ ID NO: 900)